

AMENDMENTS TO THE CLAIMS:

1-46. (canceled)

47-62. (cancelled)

63. (currently amended) A process for the preparation of ~~an array of well-defined cells used in~~ a liquid crystal display, which process comprises the steps of:

a) providing microcaps;

ab) filling the microcaps with a liquid crystal composition and a dispersion of a thermoset or thermoplastic precursor which has a specific gravity lower than that of the liquid crystal composition; and

bc) sealing the filled microcaps by hardening the thermoset or thermoplastic precursor dispersion during or after it phase separates and forms a supernatant layer above the liquid crystal composition.

64. (previously presented) The process of Claim 63 wherein the liquid crystal composition comprises guest dye(s).

65. (previously presented) The process of Claim 63 wherein the thermoset or thermoplastic precursor dispersion comprises a material selected from the group consisting of acrylates or methacrylates, vinyls, polyvalent acrylates or methacrylates, cyanoacrylates, polyvalent vinyls, polyvalent epoxides, polyvalent isocyanates, polyvalent allyls, and oligomers or polymers derived therefrom.

66. (previously presented) The process of Claim 65 wherein said polyvalent vinyl is vinyl benzene, vinylsilane, or vinyl ether.

67. (previously presented) The process of Claim 65 wherein said oligomers or polymers are derived from those containing crosslinkable functional groups.

68. (currently amended) A process for the preparation of ~~well-defined cells used in~~ a liquid crystal display, which process comprises the steps of:

a) providing microcaps;

ab) filling the microcaps with a liquid crystal composition;

bc) sealing the fill d microcups by overcoating onto ~~the~~ said liquid crystal composition a thermoset or thermoplastic precursor composition which is at least partially immiscible with said liquid crystal composition and has a specific gravity lower than that of said liquid crystal composition; and

ed) hardening said thermoplastic or thermoset precursor composition.

69. (currently amended) The process of Claim 68 wherein the thermoplastic or thermoset precursor composition is diluted with a volatile solvent or solvent mixture which is evaporated after said thermoplastic or thermoset precursor composition is overcoated onto the liquid crystal composition display.

70. (currently amended) The process of Claim 68 wherein the ~~overcoated~~ thermoplastic or thermoset precursor composition is cured by radiation, heat, moisture, or interfacial reactions at the interface between the thermoplastic or thermoset precursor composition ~~overcoat~~ and the liquid crystal composition display.

71. (previously presented) The process of Claim 68 wherein the thermoplastic or thermoset precursor composition comprises a material selected from the group consisting of acrylates or methacrylates, vinyls, polyvalent acrylates or methacrylates, cyanoacrylates, polyvalent vinyls, polyvalent epoxides, polyvalent isocyanates, polyvalent allyls, oligomers or polymers derived therefrom.

72. (previously presented) The process of Claim 71 wherein said polyvalent vinyl is vinyl benzene, vinylsilane, or vinyl ether.

73. (previously presented) The process of Claim 71 wherein said oligomers or polymers are derived from those containing crosslinkable functional groups.

74. (currently amended) A process for the manufacture of a liquid crystal display, which process comprises the steps of:

a) preparing microcups ~~by first coating a layer of thermoplastic or thermoset precursor~~ on a first conductor film ~~followed by embossing the thermoplastic or thermoset precursor layer with a male mold or by imagewise~~

~~exposing the thermoplastic or thermoset precursor layer and removing the unexposed areas;~~

- b) filling ~~in the thus-formed array of~~ microcups with a liquid crystal composition;
- c) sealing the filled microcups; and
- d) laminating the sealed ~~array of microcups~~ liquid crystal cells with a second conductor film to form a liquid crystal display preferably pre-coated with an adhesive layer.

75. (currently amended) The process of Claim 74 wherein said second conductor film is pre-coated with an the adhesive layer which is hardenable or crosslinkable by heat, moisture or radiation; and curable~~is cured~~ during or after lamination.

76. (currently amended) A process for the manufacture of a multi-color liquid crystal display, which process comprises the steps of:

- a) preparing microcups ~~by first coating a layer of thermoplastic or thermoset precursor~~ on a first conductor film ~~followed by embossing the thermoplastic or thermoset precursor layer with a male mode or by imagewise exposing the thermoplastic or thermoset precursor layer and removing the unexposed areas;~~
- b) laminating the ~~thus-formed array of~~ microcups with a layer of a positive photoresist;
- c) imagewise exposing the positive photoresist to selectively open the microcups in a predetermined area;
- d) filling ~~in the~~ opened microcups with a liquid crystal composition ~~with guest dye(s)~~ of a first color;
- e) sealing the microcups filled with ~~to enclose~~ the liquid crystal composition ~~with guest dye(s)~~ of the first color;

- f) repeating Steps c) to e), ~~if necessary~~, in different areas with liquid crystal compositions of different colors to generate groups of microcups filled with~~containing~~ the liquid crystal compositions of different colors;
- g) removing residual positive photoresist, if any; and
- h) laminating the sealed array of microcups liquid crystal cells with a second ~~transparent~~ conductor film to form a multi-color liquid crystal display pre-coated with an adhesive layer.

77. (currently amended) The process of Claim 74 wherein the filling and sealing of the microcups is accomplished by filling the microcups with the liquid crystal composition and a dispersion of a thermoplastic or thermoset precursor composition which has a specific gravity lower than that of the liquid crystal composition, followed by hardening the thermoplastic or thermoset precursor composition during or after it phase separates and forms a supernatant layer above the liquid crystal dispersion.

78. (currently amended) The process of Claim 7477 wherein ~~the sealing of the microcups is accomplished by filling the microcups with~~ the liquid crystal composition and comprises guest dye(s).

79. (currently amended) The process of Claim 76 wherein the filling and sealing of the microcups is accomplished by filling the microcups with the liquid crystal composition and a dispersion of a thermoplastic or thermoset precursor composition which has a specific gravity lower than that of the liquid crystal composition, followed by hardening the thermoplastic or thermoset precursor composition during or after it phase separates and forms a supernatant layer above the liquid crystal composition.

80. (currently amended) The process of Claim 7679 wherein ~~the sealing of the microcups is accomplished by filling the microcups with~~ the liquid crystal composition comprises and guest dye(s).

81. (previously presented) The process of Claim 74 wherein the sealing of the filled microcups is accomplished by overcoating onto the liquid crystal composition a thermoplastic or thermoset precursor composition which is at least partially immiscible

with said liquid crystal composition and has a specific gravity lower than that of said liquid crystal composition, followed by hardening the thermoplastic or thermoset precursor composition.

82. (previously presented) The process of Claim 76 wherein the sealing of the filled microcups is accomplished by overcoating onto the liquid crystal composition a thermoplastic or thermoset precursor composition which is at least partially immiscible with said liquid crystal composition and has a specific gravity lower than that of said liquid crystal composition, followed by hardening the thermoplastic or thermoset precursor composition.

83. (canceled)

84. (currently amended) The process of Claim 76 wherein an adhesive layer is precoated on the positive photoresist ~~and laminated onto the array of microcups.~~

85. (canceled)

86. (currently amended) The process of Claim 84 wherein said adhesive is developable by athe developer of the positive photoresist.

87. (previously presented) The process of Claim 76 wherein color filters are laminated or coated onto the display.

88. (previously presented) The process of Claim 87 wherein said color filters are red, green or blue.

89. (new) The process of Claim 63 wherein said microcups are washed before being filled.

90. (new) The process of Claim 89 wherein said microcups are washed with hexane.

91. (new) The process of Claim 89 wherein said microcups are washed with methylethylketone.

92. (new) The process of Claim 68 wherein said microcups are washed before being filled.

93. (new) The process of Claim 92 wherein said microcups are washed with hexane.

94. (new) The process of Claim 92 wherein said microcups are washed with methylethylketone.

95. (new) The process of Claim 74 wherein said microcups are prepared embossing the thermoplastic or thermoset precursor layer with a male mold.

96. (new) The process of Claim 74 wherein said microcups are prepared by imagewise exposing a thermoplastic or thermoset precursor layer and removing the unexposed areas.

97. (new) The process of Claim 76 wherein said microcups are prepared by embossing the thermoplastic or thermoset precursor layer with a male mold.

98. (new) The process of Claim 76 wherein said microcups are prepared by imagewise exposing a thermoplastic or thermoset precursor layer and removing the unexposed areas.

99. (new) The process of Claim 76 wherein said second conductor film is pre-coated with an adhesive layer which is hardenable or cross-linkable by heat, moisture or radiation and curable during or after lamination.